

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1.-30. (Cancelled)

31. (Currently Amended) A plate heat exchanger comprising a number of heat exchanger plates, which are arranged beside each other and connected to each other by means of a braze connection,

wherein the heat exchanger plates are substantially manufactured in stainless steel containing chromium,

wherein the plate heat exchanger includes a number of port channels extending through at least some of the heat exchanger plates,

wherein one or more of the port channels are surrounded by a connection surface prepared for a later connection of the one or more port channels to a pipe member, and

wherein the connection surface is formed by a material that permits brazing of said pipe member to the connection surface in an easier manner than to stainless steel, wherein said material is more reduction susceptible than chromium dioxide, wherein said material is based on nickel and has a thickness between ~~about~~ 20 and 50 μm ,

wherein the material is bound to the stainless steel through diffusion of atoms from the material into the stainless steel and from the stainless steel into the material, and

wherein the material has a melting temperature such that the material does not melt when later connected to the pipe member.

32-33. (Canceled).

34. (Previously Presented) A plate heat exchanger according to claim 31, wherein said braze connection of the heat exchanger plates is accomplished by a braze process.

35. (Canceled).

36. (Previously Presented) A plate heat exchanger according to claim 31, wherein said diffusion is accomplished during a braze process.

37. (Previously Presented) A plate heat exchanger according to claim 31, wherein one of said heat exchanger plates forms an outer heat exchanger plate which has a respective outer surface area surrounding a respective port channel.

38. (Previously Presented) A plate heat exchanger according to claim 37, wherein said material is supplied to the outer surface area for forming said connection surface.

39. (Previously Presented) A plate heat exchanger according to claim 31, wherein the plate heat exchanger includes a connection member at each port channel, wherein a connection member forms said connection surface.

40. (Previously Presented) A plate heat exchanger according to claim 37, wherein a connection member is attached to the outer surface area.

41. (Previously Presented) A plate heat exchanger according to claim 40, wherein the connection member has a primary surface onto which said material is applied for forming said connection surface.

42. (Previously Presented) A plate heat exchanger according to claim 41, wherein the primary surface has a rough surface finish, which is accomplished through abrasive blasting or any similar roughening process and which facilitates wetting of the primary surface with said material.

43. (Previously Presented) A plate heat exchanger according to claim 42, wherein said material has been applied onto the primary surface by means of and during a braze process.

44. (Previously Presented) A plate heat exchanger according to claim 39, wherein the connection member is substantially manufactured in a stainless steel containing chromium.

45. (Previously Presented) A plate heat exchanger according to claim 39, wherein the connection member is substantially manufactured in an alloy substantially containing copper and nickel.

46. (Previously Presented) A plate heat exchanger according to claim 45, wherein said alloy contains 55 to 95 percent by weight copper and 5 to 45 percent by weight nickel.

47. (Previously Presented) A plate heat exchanger according to claim 39, wherein the connection member is designed as a pipe nipple.

48. (Previously Presented) A plate heat exchanger according to claim 39, wherein the connection member is designed as a washer.

49. (Currently Amended) A method for manufacturing a plate heat exchanger including a number of heat exchanger plates, which are substantially manufactured in stainless steel containing chromium, and including a number of port channels extending through at least some of the heat exchanger plates, and wherein one or more of the port channels are surrounded by a connection surface prepared for a later connection of the port channel to a pipe member, the method comprising:

applying a material, which forms the connection surface and which permits brazing of said pipe member to the connection surface in a more easy manner than to stainless steel, wherein said material is more reduction susceptible than chromium dioxide, wherein said material is based on nickel and has a thickness between about 20 and 50 μm ,

arranging the heat exchanger plates beside each other, and

joining the heat exchanger plates to each other by means of a braze connection,

wherein the brazing is performed in such a manner that said material is bound to the stainless steel through diffusion of atoms from the material into the stainless steel and from the stainless steel into the material, and

wherein the material has a melting temperature such that the material does not melt when later connected to the pipe member.

50-51. (Canceled).

52. (Previously Presented) A method according to claim 49, wherein said joining includes a braze process with brazing of the heat exchanger plates at vacuum-like pressure conditions or in an atmosphere with substantially inert gas or a reducing gas.

53. (Canceled)

54. (Previously Presented) A method according to claim 49, wherein one of said heat exchanger plates forms an outer heat exchanger plate having a respective outer surface area surrounding a respective port channel and wherein said applying includes that said material is applied to the outer surface area for forming said connection surface.

55. (Previously Presented) A method according to claim 49, wherein one of said heat exchanger plates forms an outer heat exchanger plate having a respective outer surface area surrounding a respective port channel and wherein the method further includes:

applying a connection member to the outer surface area at each port channel before said joining of the heat exchanger plates, wherein the connection member forms said connection surface.

56. (Previously Presented) A method according to claim 55, wherein the connection member has a primary surface and wherein said applying a material includes applying said material to the primary surface for forming said connection surface by means of and during said braze process.

57. (Previously Presented) A method according to claim 56, further including an initial roughening of the primary surface through blasting or the like for accomplishing rough surface finish facilitating wetting of the primary surface by said material during said braze process.

58. (Previously Presented) A method according to claim 55, wherein the connection member is substantially manufactured in stainless steel containing chromium.

59. (Previously Presented) A method according to claim 58, wherein the connection member is substantially manufactured in an alloy substantially containing copper and nickel.

60. (Previously Presented) A method according to claim 59, wherein said alloy includes 55 to 95 percent by weight copper and 5 to 45 percent by weight nickel.

61. (Currently Amended) A method of manufacturing a plate heat exchanger comprising:

providing a number of heat exchanger plates having port channels that extend through at least some of the plates, wherein each plate has a connection surface that surrounds each port channel, wherein each connection surface is prepared to be subsequently brazed to a pipe member;

applying a material that is based on nickel to one or more of the connection surfaces, wherein the material is applied to the surface in a thickness between about 20 and 50 μm ; and

brazing a pipe member to one or more of the connection surfaces, to which the material that is based on nickel has been applied, wherein the material has a melting temperature such that the material does not melt during the subsequent brazing;

arranging the heat exchanger plates beside each other to form a plate package;

compressing the plate package; and

brazing the heat exchanger plates in the plate package to each other,

wherein the material that includes nickel is applied to the one or more connection surfaces before brazing the pipe member or brazing the heat exchanger plates to each other,

wherein the brazing is performed in such a manner that said material is bound to the stainless steel through diffusion.

62. (Previously Presented) The method of manufacturing of claim 61 wherein brazing the pipe member and brazing the heat exchanger plates to each other is accomplished with a braze process utilizing a vacuum or gas atmosphere consisting substantially of an inert gas or a reducing gas.

63. (Previously Presented) A plate heat exchanger comprising a number of heat exchanger plates, which are arranged beside each other and connected to each other by means of a braze connection,

wherein the heat exchanger plates comprising stainless steel containing chromium,

wherein the plate heat exchanger includes a number of port channels extending through at least some of the heat exchanger plates,

wherein one or more of the port channels is surrounded by a connection surface for a later connection of the one or more port channels to a pipe member,

wherein the connection surface comprises a material that permits brazing of said pipe member to the connection surface in an easier manner than to stainless steel,

wherein said material is more reduction susceptible than chromium dioxide,

wherein the plate heat exchanger includes a connection member at each port channel, and wherein each connection member forms one of the connections surfaces and comprises an alloy with 55 to 95 percent copper by weight and 5 to 45 percent nickel by weight, and